

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Sewer Branch

Waterbody Segment at a Glance:

County: Pettis
Nearby Cities: Sedalia
Length of impairment: No mileage assigned
Pollutant: Low Dissolved Oxygen
Source: Unknown Point and Nonpoint Sources



State map showing location of watershed

TMDL Priority Ranking: Medium

Description of the Problem

Beneficial uses of Sewer Branch

- The affected portion of Sewer Branch is not classified so no beneficial uses are assigned to it; however, all waterbodies in Missouri are protected by the general criteria (standards) contained in Missouri's Water Quality Standards (WQS), 10 CSR 20-7.031.

Use that is impaired

- None, since no beneficial uses can be assigned

Standards that apply

- All waterbodies in Missouri are protected by the general criteria (standards) contained in Missouri's Water Quality Standards (WQS), 10 CSR20-7.031(3). These criteria are also called narrative criteria, since they do not contain specific numerical limits. For Sewer Branch, points (3)(D) and (G) apply:
 - Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.
 - Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.

Background Information and Water Quality Data

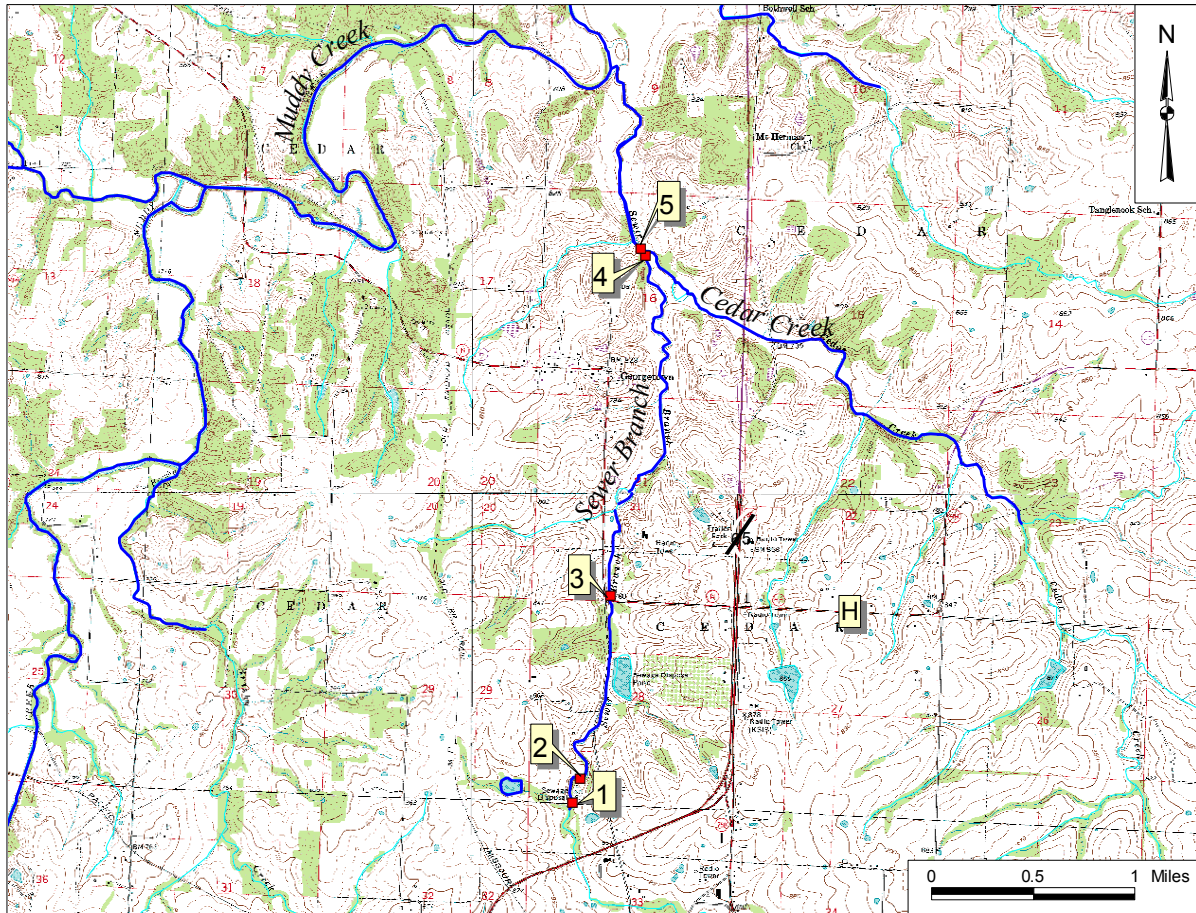
The U.S. Environmental Protection Agency (EPA) placed Sewer Branch on the 303(d) list for low dissolved oxygen (DO) in an unclassified segment well above the classified portion. However, specific (numeric) WQS do not apply to unclassified stream sections. A TMDL is a numeric calculation, so those specific numbers are needed. EPA listed the source as "unknown point and

nonpoint sources” based in part on a 2000 visual/qualitative benthic survey conducted by the department. This survey indicated that there were no invertebrates upstream or downstream of the Hubbard Park combined sewer overflow (CSO). The CSO is located upstream of the Sedalia North WWTP and an industrial park area. This site is in the extreme upper portion of the watershed where the stream is an unclassified first order stream, meaning that it rarely carries water and would be expected to have few, if any, aquatic animals. EPA acknowledges that this lack of invertebrates in a first order stream is not proof of a water quality problem. However, in three 24-hour water quality surveys conducted by the department between 2000 and 2002, the results of five out of twenty samples collected above and below the Sedalia North Wastewater Treatment Plant (WWTP) were below 5 mg/L DO, Missouri’s WQS. EPA asserts that this demonstrates that the waterbody is not meeting Missouri’s general criteria, which apply to all waterbodies in Missouri. Refer to the “Standards that apply” section above.

The department does not argue that the stream is not impaired, just that it should not be placed on the 303(d) list according to the current listing methodology and Missouri’s Water Quality Standards. The department would actually prefer to list Sewer Branch for habitat loss. However, since no numeric criteria can be applied to that particular impairment, it is inappropriate to place Sewer Branch on the list. There is no doubt that best management practices need to be implemented to restore the stream to health. The department is encouraging the use and development of comprehensive watershed plans to improve waterbodies throughout the state.

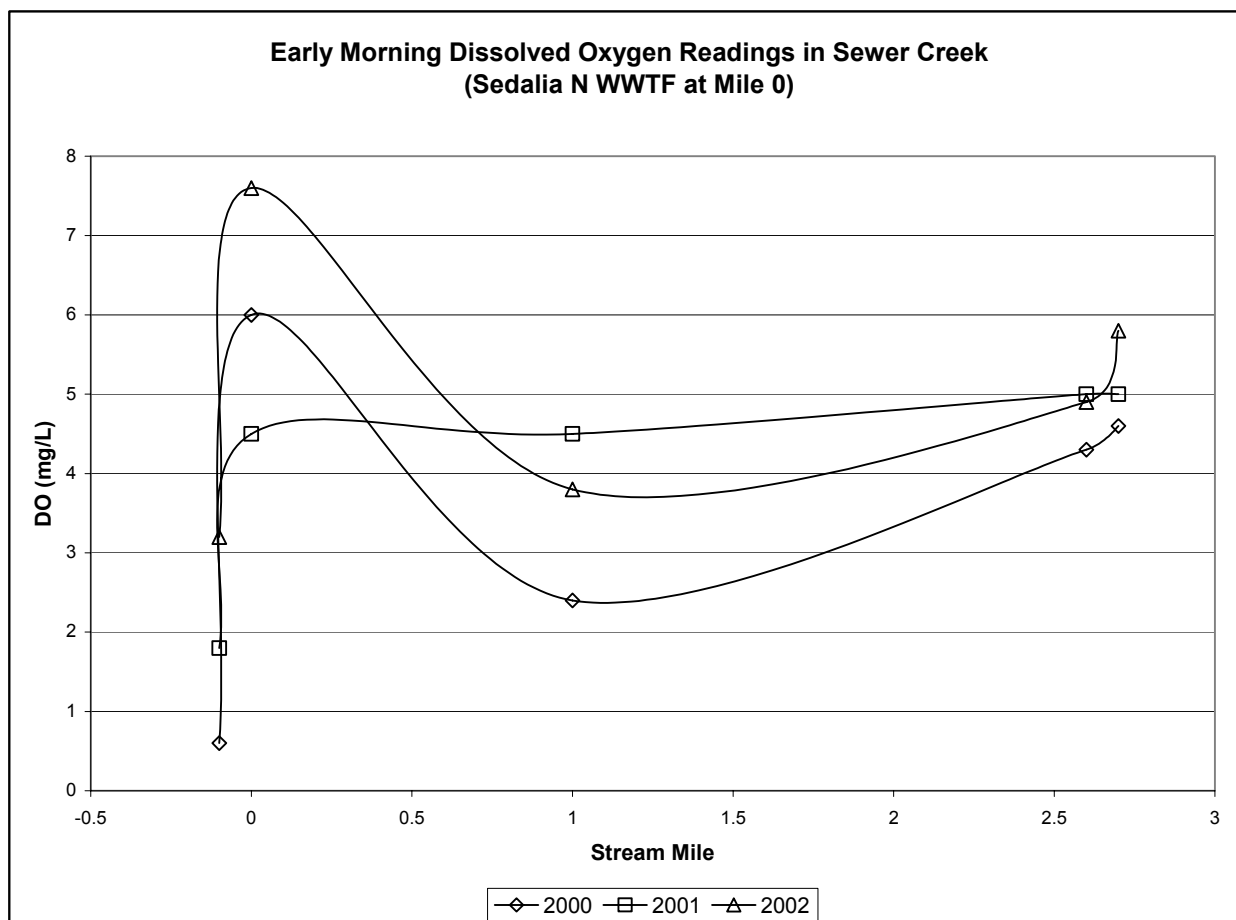
A map of the stream and data from the surveys may be found below.

Sewer Branch in Pettis County, Missouri, with Sampling Sites



Monitoring Site Index

- 1 – Sewer Branch 0.1 mile upstream of Sedalia N WWTP
- 2 – Sedalia N WWTP Outfall
- 3 – Sewer Branch 1 mile downstream of Sedalia N WWTP
- 4 – Sewer Branch 2.6 miles downstream of Sedalia N WWTP (upstream of confluence with Cedar Creek)
- 5 – Sewer Branch 2.7 miles downstream of Sedalia N WWTP (downstream of confluence with Cedar Creek)



Source: Department of Natural Resources

For more information call or write:

Missouri Department of Natural Resources

Water Protection Program

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